Sustainability of Community Led Total Sanitation in Rural India: A Comparative Study of Chhattisgarh and West Bengal

SYNOPSIS OF THE THESIS

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INTRODUCTION

Sanitation still remains to be one of the biggest development challenges in Rural India. Due to this long-neglected issue associated with taboos and stigma, about 65 percent people still practice open defecation. Despite of several sanitation programs being implemented by the Government since Independence, this issue still remains wide open. As per the Progress on Drinking Water and Sanitation, 2014 update, about one billion or 15 percent of the world's population defecate in open. Out of this, nearly 595 million or almost 60 percent belong to India which deposits about 65,000 tonnes of excreta in the open every day which is the main reason for diarrhea which kills nearly 188,000 children less than 5 years placing India on top of this tally. Apart from being national shame this open defecation leads to several other serious health problems like environmental enteropathy, malnutrition, stunting, low-birth weights, obesity, diabetes and epilepsy etc. In addition to this, it is also causing huge economic loss equivalent to $48 per person or 6.4 percent of GDP (WSP 2006) while this figure was between 1-2 percent in African countries.

Government of India has spent a whooping amount of INR 1,57,000 crore since 1951 on several sanitation programmes. Till now four national level programs have been implemented for the improvement of sanitation in India namely Central Rural Sanitation Programme (CRSP) in 1986, Total Sanitation Campaign (TSC) 1999, Nirmal Bharat Abhiyan (NBA) 2012 and Swachh Bharat Mission (SBM) in 2014. But the traditional top-down approaches could not succeed in addressing this issue as the focus was only on toilet construction and not on behavioral change, toilets were thrust upon the people without trying to know their preferences and finally, the beneficiaries were hardly involved in the construction of their toilets. At the level of communities, Open Defecation (OD) was seen as an accepted social norm (behavior) and it was

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never challenged by anyone; people never stood up against this practice. That is why open defecation is continuing. On the other hand, there are examples of communities in which people decided to end OD; they persuaded each other to end OD and achieved it.

The Community Led Total Sanitation (CLTS) Approach which originated in Rural Bangladesh in the year 2000 focuses on facilitating a reflective change in people's behavior through participatory techniques. It has shown remarkable results and is being implemented in at least 40 nations. CLTS is an empowering process of social awakening in which people are collectively engaged into the analysis of their current situation of sanitation profile of their village. This analysis often makes them realize that they are eating one another's shit. This creates emotions like shame, disgust and fear, which compel them to think and act. Thus a community resolve comes and they decide to end OD. Then they start collective local action to achieve Open Defecation Free (ODF) status without waiting for external help or subsidy. In the recent past, the communities where CLTS has been implemented, have shown significant results and hundreds of villages/habitations have achieved ODF status.

This research intends to explore and identify the critical factors affecting the sustainability of CLTS and their impact on rural sanitation transformation by conducting a comparative study of Chhattisgarh and West Bengal where it has been implemented on a large scale and per capita income of both the states fall in the range of INR 60,000-80,000. During 2014-15, the per capita income for Chhattisgarh & West Bengal is INR.64442 and INR.78903 respectively which indicates that the financial condition of the people is nearly similar as compared to other states where CLTS has been implemented recently (2013-16).

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Rural Sanitation and Issues

Gunther and Fink (2011) in their working paper "Water, Sanitation and Children's Health: Evidence from 172 DHS Surveys" investigated the mortality impact of improved water and sanitation access in order to evaluate its contribution in achieving the targets as per the Millennium Development Goal 4 and found out that average mortality reduction possible by venturing into water and sanitation facilities is 25 deaths per 1000 children born across nations which is almost 40 percent of difference between present child mortality rates and the targeted rate as per the Millennium Development Goals.

Coffey et.al. (2014) in their research paper "Culture and Health Transition: Understanding Sanitation Behavior in Rural North India" have examined the cultural meaning of toilet usage and open defecation and found out that beliefs, values and norms about purity and pollution of private spaces and of bodies help in explaining the wide spread of open defecation and the renegotiation of caste and untouchability complicates the acceptance of simple latrine technologies that are important input into health transitions in other developing regions.

Chambers and Medeazza (2014) in the working paper "Reframaing Undernutrition: Faecally-Transmitted Infections and the 5 As" explained that the Faecally- Transmitted Infections (FTIs) is one of the main reasons for under-nutrition especially in Asian context. This "Asian Enigma" is directly related to Open Defecation combined with density of population. The study presents the relationship between OD and FTIs, poverty and under-nutrition in Indian context where almost 60 percent of the population defecates in the open. They propose two inclusive concepts in order to reframe under-nutrition for a better understanding and interventions; the first being

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FTIs and second being 5As (Availability and Access- oral and food intake, Absorption, Antibodies and Allopathogens – novel and internal).

Rural India has uniquely high rates of Open Defecation, relatively much higher than poorer nations. Coffey (2015) in his paper "Accelerating the Reduction of Open Defecation in Rural India Begins by Admitting the Problem" has outlined and discussed that the "usual suspects" such as GDP, education, poverty and water access are not the factors behind open defecation in India. Further, the comparison between toilet technology used in rural India and rest of the developing world and the implications of government policies has been explained though this paper.

Communtiy Led Total Sanitation (CLTS)

Wellington (2005) through his paper "Status of Community Led Total Sanitation (CLTS) in Nepal" studied the status of Community Led Total Sanitation (CLTS) with reference to the Millennium Development Goals (MDGs) in Nepal. It further explores the reasons for the poor health and deteriorating quality of life of millions of Nepalis, especially the poorest and most vulnerable. The paper also describes as to how the Participatory Rural Appraisal (PRA) under CLTS, helps the community in understanding the poor condition of sanitation and its effect on the health and life of the people. It also outlines the need of new and innovative approaches in expanding the sanitation throughout the nation.

Kumar and Shukla (2008) through their research paper "Doing CLTS in a Countrywide Program Context in India: Public Good v Private Good" examined the factors that have been instrumental in adoption and spread of Community Led Total Sanitation (CLTS) in Indian context. These have been categorized as internal and external factors. The natural leaders and champions belong

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to the first category while institutional arrangements and policy issues belong to second. The relationship between them is very critical in determining the outcomes of CLTS. The paper is divided into four sections; the first section finds out the role of CLTS in Total Sanitation Campaign (TSC) with reference to the Millennium Development Goals. The second section explains the manner in which CLTS and TSC address sanitation as public and private goods respectively and their significance on policy and practice. The third discusses the ways in which CLTS is being implemented in India and the challenges and issues related to it. Finally, the fourth section is about the emerging requirements in the view of the need to make CLTS work and transform the sanitation scenario in India.

Kar and Milward (2011) through their research paper "Digging in, Spreading out and Growing up: Introducing CLTS in Africa" describe the early stages of Community Led Total Sanitation and the circumstances and features which have facilitated the rapid spread through institutionalization and contribution of the key factors during the introduction of CLTS in Africa. The paper also discusses few adaptations made to CLTS in response to a wide range of pressures, different country circumstances and strategic preferences.

Andre and Brian (2013) through their research paper "An Untold Story of Policy Failure: The Total Sanitation Campaign in India" explored the Total Sanitation Program (TSP) as a community led, people centered, demand driven, and incentive based programme thought to be ideal for addressing sanitation problems in India, which could not realize the expected outcomes and thus the policy failed to translate into practice. Drawing evidence from two co-ordinated studies from four states, it focuses to understand the dichotomy of the Total Sanitation Program policy and practice, its causes, and the potential of a new sanitation campaign, Nirmal Bharat Abhiyan.

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Policy and Planning

Ban et.al.(2009) in the policy research working paper for the World Bank "The Political Economy of Village Sanitation in South India: Capture of Poor Information?" highlighted the policy and planning related issues where the local politicians hold the responsibility of toilet construction without any proper knowledge and expertise. They further suggest that there is a need for certain public health regulations and measures for accountability for the service providers.

Mairano (2014) in the paper "The Politics of the Mahatma Gandhi National Rural Employment Guarantee Act in Andhra Pradesh" studied the impact and implementation of the Mahatma Gandhi National Rural Employment Guarantee Act, the world's largest employment scheme, in Andhra Pradesh and found out that due to the political commitment of state's Chief Minister, the implementation performance was good.

Rural Planning has been explained as developing and protecting physical and human capital and it also includes the development of agriculture as well as natural resources. Dandekar (2015) through the paper "Rural Planning: General" outlines the importance of rural planning in expanding rural economy, eliminate inequity and manage resources in a sustainable way.

Sustainability

Sharachchandra (1991) in his paper "Sustainable Development : A Critical Review" discussed about the inconsistencies and weaknesses in the interpretation of Sustainable Development arising due to lack of incomplete perceptions about the problems related to poverty and environmental degradation and confusion about the role of economic growth and about the concepts of sustainability and participation. He suggests that if Sustainable Development has to

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have a fundamental impact, political ambiguity has to be given up in favor of intellectual precision and rigor.

Vernon and Bongartz (2016) in their paper "Going Beyond Open Defecation Free" have discussed about the key challenges in sustaining Community Led Total Sanitation and aspects connected to it such as behavior change, physical sustainability and sanitation marketing, equity and inclusion, monitoring and verification, engagement of governments, NGOs, and donors, particularly after achieving ODF status. The second part of the paper proposes certain ways through which Sustainable Development Goals (SDGs) of universal access to improved sanitation can be achieved by 2030.

Hanchett (2016) through her research paper "Sanitation in Bangladesh: Revolution, Evolution, and New Challenges" reviewed the history of sanitation promotion in Bangladesh, which is deemed as hub of sanitation experimentation and model building. It is also recognized as the place where CLTS was developed and succeeded in getting many habitations open defecation free. The paper discusses and summarizes the major issues and challenges related to sustaining the nation's improved sanitation and outline several important points of possible interest to other nations.

Mukherjee (2016) in her paper "Building Environments to Support Sustainability of Improved Sanitation Behaviors at Scale: Levers of Change in East Asia" outlined the learning about creating supportive policy environments and institutional practices for catalyzing sustainable collective sanitation behavior change at scale including scaling up the access and usage of improves sanitation along with improving the availability of affordable sanitation to assist rural communities in achieving a sustainable open defecation free environment. Few example of Loa

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PDR, Vietnam and Indonesia have also been discussed where a set of sector change-inducing levers were implemented to build enabling environments.

OBJECTIVES

The research is being conducted to achieve the following objectives:

1. To identify the factors that affect the sustainability of community led total sanitation in rural India with special reference to Chhattisgarh and West Bengal.
2. To examine the change in the standard of living of the beneficiaries with regard to the open defecation free habitations.
3. To examine the effectiveness of CLTS with reference to "inclusion of the marginalized" within the ODF communities.
4. To study and compare the impact of CLTS on sustainable rural sanitation in these states.

METHODOLOGY

Study Design:

The research shall be carried through Causal technique as it primarily tends to study the cause and effect relationship between the factors and their impact on the sustainability of rural sanitation. Apart from demographic variables like age, gender, occupation, income, education, data on factors related to condition of rural sanitation and CLTS like situation before and after implementation of CLTS, factors which influenced people to stop open defecation and construct toilet for themselves, role and support of local/district officials and government, factors related to sustainability of sanitation through CLTS etc. shall be collected and analyzed to achieve the objectives of the study.

Duration: The approximate time to be taken for the completion of the study will be one and a half years.

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Sample Size: Sample size will be around 650 respondents out of which 600 shall be beneficiaries and remaining 50 shall be other stakeholders like government officials, NGOs, sanitary marts and volunteers etc.

Sampling Technique: Large and Small Sampling techniques will be employed to gather information from the beneficiaries and rural households and various other stakeholders.

Sample Selection: The data for the study will be collected through a survey of respondents from rural habitations which have achieved ODF status through the implementation of CLTS approach.

Sampling Design: All the 600 respondents (beneficiaries) will be selected from different age/gender groups across the following Open Defecation Free Gram Panchayats from Chhattisgarh and West Bengal respectively with the help of structured interviews and focus group discussions. Further, about 50 respondents from Government departments, NGOs and other related stakeholders from these locations shall be interviewed. The number may vary from place to place depending upon the nature and extent of contribution made by them.

Data Collection:

Primary data will be collected through a questionnaire administered to the sampled rural respondents. Secondary data will be procured from renowned and authentic statistics that exist in various journals, books, research papers, magazines, newspapers, internet websites reports and surveys undertaken previously. First of all a pilot study from a selected group of 20 respondents will be undertaken to refine the questionnaire. The validity of questionnaire will be confirmed by connoisseurs and its reliability will be tested by using Cronbach's alpha.

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Data Collection Instrument:

A simple, specific and well structured questionnaire will be administered to generate replies from the respondents. For the convenience of respondents, the questionnaire prepared shall be translated in their local language.

Measurement Scale:

Less literate population finds it difficult to fully comprehend and respond to numeric measures of rating or western rating and ranking methods. Hence, along with a few closed ended simple questions appropriate visual tools using human expressions will be used to capture rating and ranking responses from the less literate rural community. The highest scale will be reflected with very happy face (whose numeric value will be taken as 5), while the lowest one with very sad face (numeric value will be taken as 1). (MART's facial study).

For other literate stakeholders another questionnaire including several scales which will be continuous and categorical in nature, shall be employed.

Data Analysis & Statistical Tools:

The processing, classification, tabulation, analysis and interpretation of data will be done through SPSS package. The following statistical tools will be applied depending on the nature of data collected from the respondents Percentage analysis, descriptive analysis (mean and standard deviation), Chi-Square Test, Independent samples t-test, one-way ANOVA, correlation analysis, reliability analysis, factor analysis and regression analysis as applicable.

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HYPOTHESIS

The research is being conducted to study and compare the factors which are responsible for successful implementation and sustainability of improved rural sanitation through CLTS and further analyze the satisfaction levels of the beneficiaries who have made their habitations ODF with reference to the states of Chhattisgarh and West Bengal.

The following hypotheses have been formulated for the study.

Hypothesis 1

H_0 : There is a significant relationship between the factors affecting the sustainability of community led total sanitation in Chhattisgarh and West Bengal..

H_1 : There is no significant relationship between the factors affecting the sustainability of community led total sanitation in Chhattisgarh and West Bengal.

Hypothesis 2

H_0 : There is a significant difference between the change in standard of living of the beneficiaries with regard to the open defecation free habitations in the states of Chhattisgarh and West Bengal.

H_1 : There is no significant difference between the change in standard of living of the beneficiaries with regard to the open defecation free habitations in the states of Chhattisgarh and West Bengal.

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Hypothesis 3

H_0 : There is a significant difference between the effectiveness of CLTS with reference to inclusion of the marginalized community of ODF habitations in Chhattisgarh and West Bengal through CLTS.

H_1 : There is no significant difference between the effectiveness of CLTS with reference to inclusion of the marginalized community of ODF habitations in Chhattisgarh and West Bengal through CLTS.

Hypothesis 4

H_0 : There is a significant difference between the impact of CLTS on sustainable rural sanitation in the states of Chhattisgarh and West Bengal

H_1 : There is no significant difference between the impact of CLTS on sustainable rural sanitation in the states of Chhattisgarh and West Bengal

TENTATIVE CHAPTERIZATION

1. Introduction
2. Literature Review
3. Research Methodology
4. Factors affecting the sustainability and their impact on Rural Sanitation
5. Analysis and Findings
6. Conclusion and Suggestions
7. References

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